

Serial No. 10/607,482
Amdt. dated June 3, 2005
Reply to Office Action of March 25, 2005

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Amendments to the Specification:

Please rewrite the paragraph starting at line 20 on page 1 of the substitute specification as follows:

The addition ~~[[of]]~~ to the original invention is based on the main control unit and its casing, connections, electronics, and tell tale monitor. The electronics of the original invention are now formed in specific molded and designed ``modules'' or printed circuit boards (PCBs) which are able to be housed and fitted in any type of common trailer connector, including male, female connectors and adapters. This design forms a new generation trailer connector with an Electrical Tell Tale Safety System combined. Furthermore there has been additions to the electronics of the main control unit in order for the original current sensing switch to become adjustable to differing current loads making it adaptable to light emitting diode (LED) automotive lamps. Finally, an external monitor has been developed in order to be mounted on a caravan or trailer in order for the driver to see it and any people outside the vehicle, indicating the electrical safety state of the caravan or trailer.

Please rewrite the paragraphs starting at line 2 on page 2 of the substitute specification as follows:

With reference to the original invention, the main control unit was housed in an epoxy filled plastic housing which has two leads coming out either side, and these leads were distributed into connectors to connect the main control unit to the trailer wiring loom of the vehicle. With the addition, the main control unit is now placed at the end of the ~~vehicles~~ vehicle trailer wiring harness, actually inside the trailer connector. It can be adjusted to suit different trailer lamp combinations, such as LED lights and an

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external tell tale monitor has been developed to be used with the new concepts, however, the internal tell tale monitor as in the original patent is fully adaptable and vice versa.

The main control ~~[[unit's]]~~ unit electronic components ~~component's~~, and ~~[[its]]~~ their main connections are epoxy molded in modules or printed circuit boards which can be a number of differing cut or molded shapes, specific to common trailer connector types. The main connections of the main control unit protrude from the module and are aligned for exact and accurate fit with any trailer connectors. All connections including the tell tale monitor connections are now screw type connections. This design eliminates the need for the vehicles wiring to be modified as the system is now housed in the actual trailer connector and acts as an addition to the vehicle instead of a modification. The module is designed to monitor all trailer connections within the plug or a specified number of connections. The main control unit, and tell tale monitor operate the same sequence as the original invention, however it can now be adjusted using a variable or fixed resistor incorporated after the current sensing coil to monitor any required number of trailer lights instead of the unit being set at a fixed current loading. The tell tale monitor, now external, can be mounted on the caravan or trailer and its indicating LED lights~~[[, have]]~~ and has the same circuit for color combination as in the original invention. The new monitor can be seen in the drivers rear side view mirror and by any passing person to indicate the electrical safety condition to not only the driver themselves but to any external persons outside the motor vehicle. The addition is a convenient new step in the housing, connections fitment adaptability and visibility of the invented system. A Tell Tale System being part of a trailer connector that is adjustable to any type of trailer lighting combinations that can be used with an external tell tale monitor forms a new age in trailer connections.

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Please rewrite the paragraphs starting at line 9 on page 5 of the substitute specification as follows:

With reference to figure 1a the original ~~inventions~~ invention circuitry can be seen and its operation is identical to the Australian Patent No. 719780 and U.S. Patent No. 6,535,113 patented design together with the following additions. The original epoxy casing 25 which is now in the form of an accurate molded module or printed circuit board ~~[[as]]~~ can be seen in figures 2 to 4. The trailer connector 100 forms the complete housing of the main control unit which encases all connections combining the trailer connector itself and main control unit as one unique device.

Circuits 26 to 60, 27 to 61, 28 to 62, 29 to 63, 30 to 64 and 102 to 114 ~~show the capability of~~ allow the main control unit module to monitor all connections within the trailer connector. Circuit 102-114 includes current sensing switch 106 for the circuit. Light emitting diode 116 is the tell tale monitor for the circuit 102-114. Again the ~~additions~~ addition of circuit 102-114 and figure 1b showing the additional light emitting diode for the additional circuit allows ~~demonstrate the capability of~~ the module to monitor all circuits within the trailer connector. Resistors 66 to 70 are also additional to the original invention. Pull down resistors 66-70 are connected to earth 31. Resistors 66 to 70 protect the light emitting diodes 116 and 16 to 19 in the tell tale monitor 14, from illuminating by any interference from external sources such as moisture or feedback. Resistors 71 to 75 are housed in the tell tale monitor 14 to protect the LEDs 116 and 16 to 19 from high current in the case of circuit malfunction or tampering. Resistors 76 to 81 are either variable or fixed resistors that are placed anywhere in each circuit after the current sensing switches 40, 41, 42, 43, 44 and A5. Resistors 76 to 80 are connected to earth 31 and allow the current sensing switches 40 to 44 and 108 to be adjusted to suit varying currents of trailer

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loads 60 to 64 and 114. Resistors 76, 77, 78, 79, 80 and 81 can be fitted inside the main control unit 100 or after the connection block 39 and before connections 60, 61, 62, 63, 64 and 114, providing the resistors to be grounded to earth 31.

Please rewrite the paragraph starting at line 6 on page 7 of the substitute specification as follows:

Figures 10 to 14 demonstrate how the main control unit module 120 for the large seven pin round trailer connector 156 is fitted into the connector. The pin positions 158 of the common large seven pin connector 156 and the connection ~~connections~~ side 160 where the main control unit 120 is mounted are shown in Figures 10 and 12. Figure 14 shows the complete new generation connector 162 with the main control unit module 120 connected. Connections 138 and 136 are made to the vehicle trailer wiring harness and the tell tale monitor and the connections 140 are the main connection from the main control unit module 120 to the connector itself. These are the output for the trailer circuits when connected. It is again seen the main control unit module 120 is aligned and fits neatly into the connector housing and the connections 140 are accurately positioned.

Figures 15, 16, 17, 18 and 19, ~~is a description~~ are an arrangement similar to the two previous, however this time the main control unit module 128 is housed in a seven pin round trailer connector 162, with pin position ~~positions~~ 164 and connection side 166. The complete unit 168 with the main control unit module 128 connected and forming part of the connector is shown in Figure 19.

The connections from the vehicle wiring harness and tell tale monitor ~~[[and]]~~ are of the screw type. The connections 146 from the main control unit 128 to the trailer connector at 166 connect to the trailer circuits.